Slow Controls & Remote Shift Support

HPS Collaboration Meeting
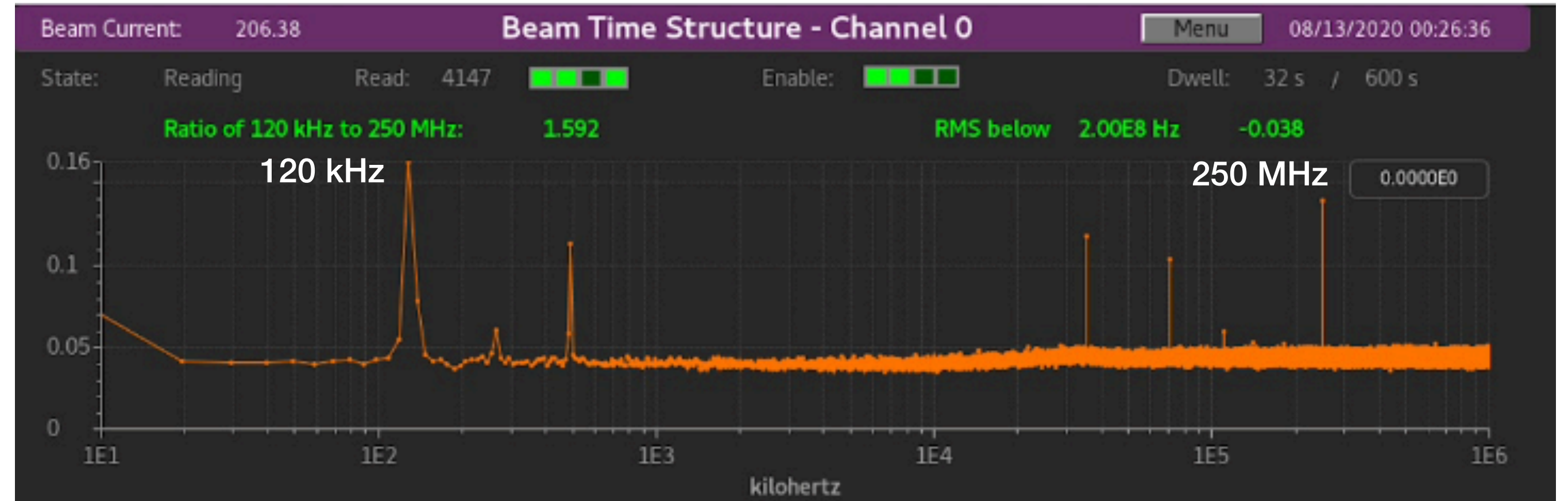
N. Baltzell - June 24, 2021

Slow Controls

This was a particularly bad instance. The corresponding trigger timestamp plot was much less severe than HPS 2019.
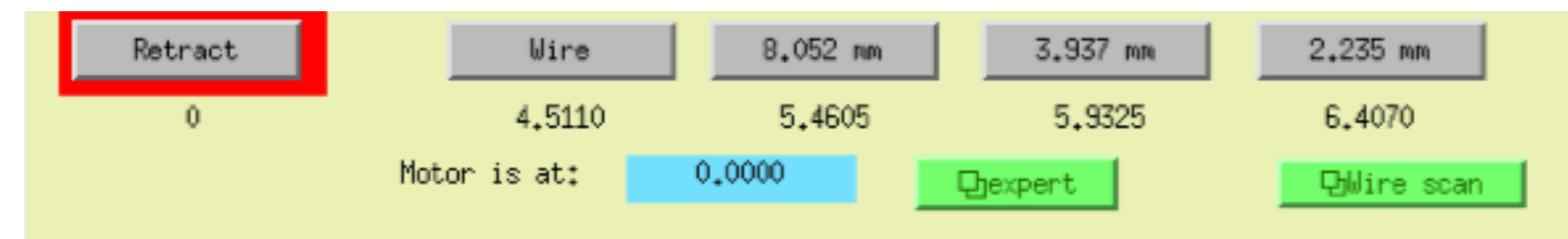
- **No fundamental changes since last run**

- **Recent/ongoing activity:**

  - Set up for new HPS collimator as surveyed

  - Replaced beam viewer camera near Faraday cup

  - Replacing Frascati power supplies breaker box (tripped a couple times during the past run, breaker box found to be faulty although may be coincidence)

  - Updates for SVT DAQ Rogue-EPICS integration (see PF/Omar's talks)

  - SVT related controls hardware (just HV/LV/Cooling?) will temporarily move to EEL and require minor network/EPICS updates

  - Need to reestablish neutron detector controls

- **New feature:**

  - After the 2019 HPS run, we added an always-on measurement of beam time structure

    - based on few PMTs near the beamline and 200-ps TDC readout in continuous mode

    - 10 kHz — 1 GHz bandwidth, used for months during CLAS running last year

Remote Shift Support

- **The current Hall-B/CLAS12/HPS plan**

  - Remote VNC clients, VNC servers running on Hall B machines

  - See the "Remote Shifts" tab on the run wiki for documentation

    - Currently just connection instructions, to be expanded

    - https://wiki.jlab.org/hps-run/index.php/
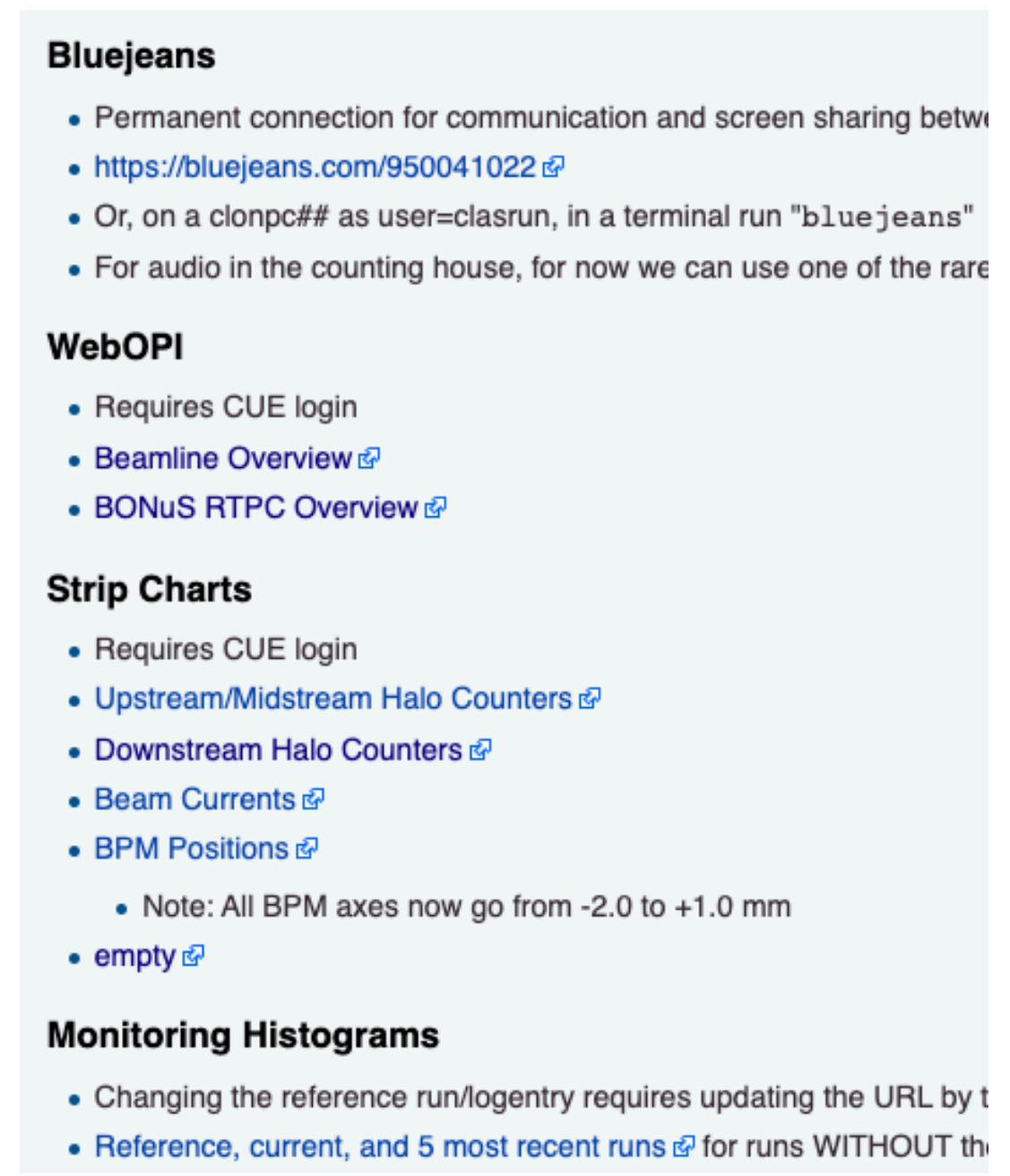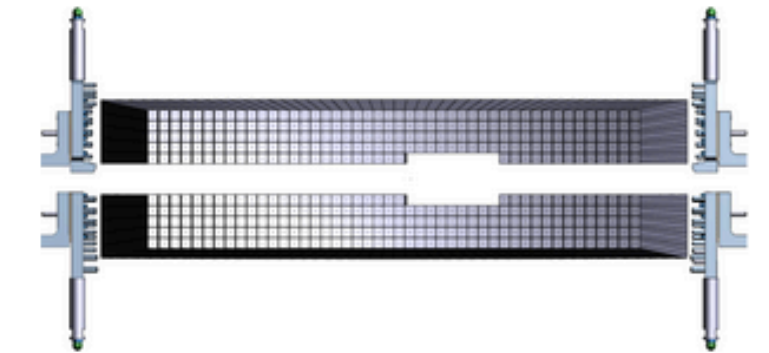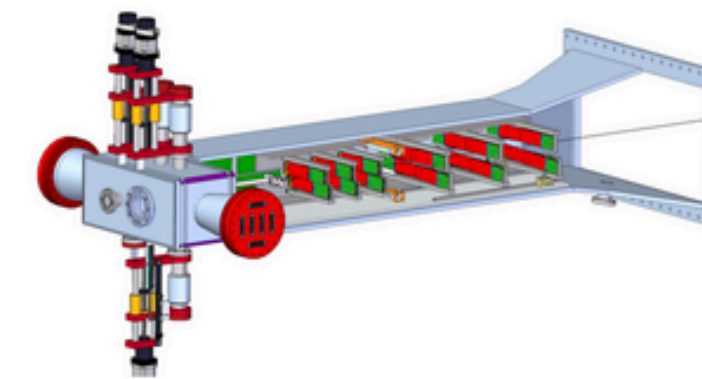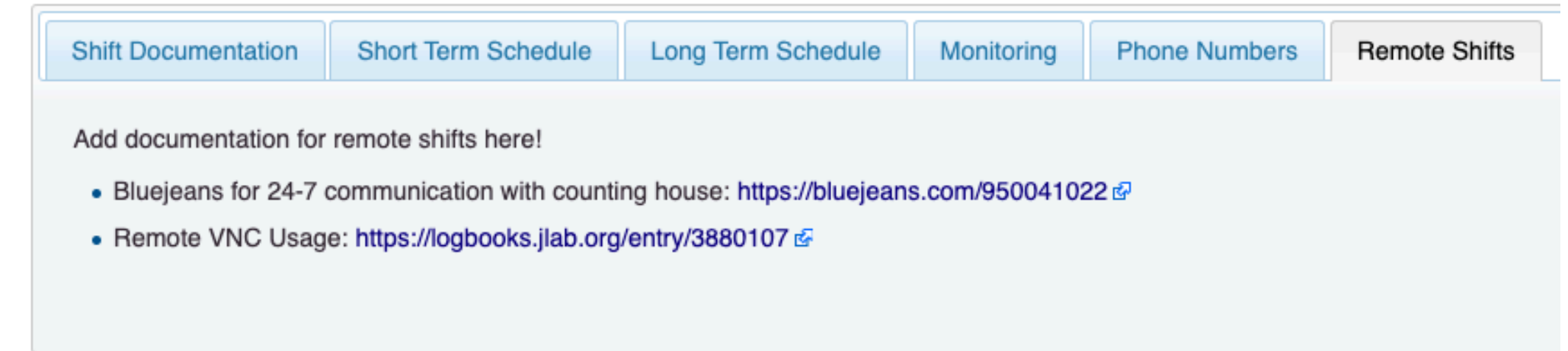   The_HPS_Run_Wiki#tab=Remote_Shifts

  - All the usual monitoring tools run the same as locally as user=hpsrun, just in VNC

    - Strip charts, EPICS screens, alarm handler, monitoring plots

  - 24-7 Bluejeans meeting for communication with counting house (and whoever else joins)

- **Web-based stuff**

  - CLAS got by with only web-based tools for previous remote shifts ————————→

    - https://wiki.jlab.org/clas12-run/index.php/Run_Group_F#tab=Remote_Shifts

  - But is switching to remote desktop for the next run for full accessibility

  - To get a non-2-factored website for some new online application (e.g. Jeremy's new online reconstruction), requirements need to be known and discussed with IT group

The HPS Run Wiki

| Shift Documentation | Short Term Schedule | Long Term Schedule | Monitoring | Phone Numbers | Remote Shifts |

Add documentation for remote shifts here!

- Bluejeans for 24-7 communication with counting house: https://bluejeans.com/950041022
- Remote VNC Usage: https://logbooks.jlab.org/entry/3880107

Bluejeans

- Permanent connection for communication and screen sharing betwe
- https://bluejeans.com/950041022
- Or, on a clonpc## as user=clasrun, in a terminal run `bluejeans`
- For audio in the counting house, for now we can use one of the rare

WebOPI

- Requires CUE login
- Beamline Overview
- BONuS RTPC Overview

Strip Charts

- Requires CUE login
- Upstream/Midstream Halo Counters
- Downstream Halo Counters
- Beam Currents
- BPM Positions
  - Note: All BPM axes now go from -2.0 to +1.0 mm
- empty

Monitoring Histograms

- Changing the reference run/logentry requires updating the URL by t
- Reference, current, and 5 most recent runs for runs WITHOUT th

Remote Shift Support - Remote Desktops

- **Many people have been relying on remote desktops regularly for years for access to Hall B online**

    - local/remote staff/collaborators, some in Europe, both Hall-B supported VNC and IT-supported VDI

- **Requirements:**

    - active JLab CUE computing account

    - 2-factor authentication to the hall gateway, register via a ServiceNow request at https://cc.jlab.org

    - a VNC client/viewer installed on your computer (e.g. TigerVNC for Linux, Safari or RealVNC for OSX)

    - a "decent" network connection

- **A more lab-wide setup may be being considered**

    - VMWare VDI, a much more modern remote desktop software

        - supported by JLab IT division currently for many groups

        - requirements: same as VNC, just a different client to install

        - probably some details to work out for expansion to remote shifts